

Claims

What is claimed is:

1. ~~A method of controlling a terminal in a communication system, the method comprising the steps of:~~

~~utilizing an automated set of operations to generate information representative of a state machine for controlling labels for a plurality of soft-labeled keys of the terminal, wherein the automated set of operations process input indicative of desired terminal features for at least one user in order to generate the information.~~

2. The method of claim 1 further including the step of determining a set of label identifiers for each of at least a subset of the states of the state machine, wherein each of the label identifiers specifies a label to be associated with a given one of the soft-labeled keys of the terminal in at least one of the states.

3. The method of claim 1 wherein the information includes a control table specifying a set of label identifiers for each of at least a subset of the plurality of states of the terminal, and a label table specifying, for each of at least a subset of the labels identified by a given one of the label identifiers, a character string corresponding to the label, a feature identifier associated with the label, and a presentation attribute.

4. The method of claim 3 wherein the set of operations includes an operation for checking a system database to extract a system feature identifier and a character string for the corresponding label.

5. The method of claim 4 wherein the set of operations includes operations for (i) checking the label table to determine if there is an entry already present for the extracted feature identifier, (ii) if no entry is found in the label table, assigning a label identifier to the feature, inserting that label identifier into a set of label identifiers associated with the corresponding state, and updating the label table with the new label identifier, the feature identifier and the character string for the label, and (iii)

if an entry is found in the label table for the feature identifier, extracting the label identifier from the label table and assigning it to the next open position for the corresponding state in the control table.

6. The method of claim 4 wherein the set of operations includes an operation for determining a descendant relationship definition for the extracted feature identifier.

7. The method of claim 6 wherein the set of operations includes an operation for creating a state in the state machine based on the relationship definition for the extracted feature identifier.

8. The method of claim 1 further including the step of repeating the set of operations for each of a plurality of sets of desired terminal features, wherein each of at least a subset of the plurality of sets is associated with a different system user or group of users.

9. The method of claim 1 wherein the automated set of operations generate different state machines for different users or groups of users of the system.

10. The method of claim 1 wherein the set of operations are implemented at least in part in software associated with a switch of the system.

11. An apparatus comprising:
a processor for implementing an automated set of operations to generate information representative of a state machine for controlling labels for a plurality of soft-labeled keys of the terminal, wherein the automated set of operations process input indicative of desired terminal features for at least one user; and
a memory for at least temporarily storing at least a portion of the information.

12. The apparatus of claim 11 wherein the processor is further operative to associate a set of label identifiers with each of at least a subset of the states of the state machine, wherein each of

the label identifiers specifies a label to be associated with a given one of the soft-labeled keys of the terminal in at least one of the states.

13. The apparatus of claim 11 wherein the information includes a control table specifying a set of label identifiers for each of at least a subset of the plurality of states of the terminal, and a label table specifying, for each of at least a subset of the labels identified by a given one of the label identifiers, a character string corresponding to the label, a feature identifier associated with the label, and a presentation attribute.

14. The apparatus of claim 13 wherein the set of operations includes an operation for checking a system database to extract a system feature identifier and a character string for the corresponding label.

15. The apparatus of claim 14 wherein the set of operations includes operations for (i) checking the label table to determine if there is an entry already present for the extracted feature identifier, (ii) if no entry is found in the label table, assigning a label identifier to the feature, inserting that label identifier into a set of label identifiers associated with the corresponding state, and updating the label table with the new label identifier, the feature identifier and the character string for the label, and (iii) if an entry is found in the label table for the feature identifier, extracting the label identifier from the label table and assigning it to the corresponding state in the control table.

16. The apparatus of claim 14 wherein the set of operations includes an operation for determining a descendant relationship definition for the extracted feature identifier.

17. The apparatus of claim 16 wherein the set of operations includes an operation for creating a state in the state machine based on the relationship definition for the extracted feature identifier.

18. The apparatus of claim 11 wherein the processor is further operative to repeat the set of operations for each of a plurality of sets of desired terminal features, wherein each of at least a subset of the plurality of sets is associated with a different system user or group of users.

5 19. The apparatus of claim 11 wherein the automated set of operations generate different state machines for different users or groups of users of the system.

20. The apparatus of claim 11 wherein the processor and memory are elements of a switch of the system.

10 21. The apparatus of claim 11 wherein the processor and memory are elements of a computer associated with a switch of the system.

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22. ~~An article of manufacture comprising a machine-readable storage medium storing one or more programs for implementing a method of controlling a terminal in a communication system, wherein the one or more programs comprise an automated set of operations to generate information representative of a state machine for controlling labels for a plurality of soft-labeled keys of the terminal, wherein the automated set of operations process input indicative of desired terminal features for at least one user in order to generate the information.~~